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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,817	10/20/2003	Takahisa Ikeda	03604/LH	4376
1933	7590	06/27/2005	EXAMINER	
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC			VO, ANH T N	
220 5TH AVE FL 16			ART UNIT	
NEW YORK, NY 10001-7708			PAPER NUMBER	
			2861	
DATE MAILED: 06/27/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,817

Applicant(s)

IKEDA, TAKAHISA

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/20/03 & 6/7/04</u> . | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 2861

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The references cited on PTO 1449 have been considered.

Specification

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objection

Claim 1 is objected to because of the following informalities: "the ink reservoir surface" lacks antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Appropriate correction or clarification is required.

Art Unit: 2861

With regard to claim 1, it is unclear how the ink reservoir can apply a negative pressure by a difference in level of an ink reservoir surface and the nozzle and how this limitation is read on the preferred embodiment. In so far as understood no such limitation is seen on the drawings.

The claims 2-3 remain is dependent from the above claim 1 and therefore is also considered indefinite.

CLAIM REJECTIONS

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Nowell, Jr. et al. (US Pat. 6,213,596) in view of Brooks et al. (US Pat. 5,910,810) and Brooks et al. (US Pat. 6,557,990).

Nowell, Jr. et al disclose in Figure an ink supply system (10) comprising:

- an ink jet head (12) that discharges supplied ink from a nozzle;
- a deaeration device (28) that deaerates dissolved gas from the ink supplied to the ink jet head (12);
- an ink reservoir (46) that is provided in an ink channel (36, 42, 50) between the deaeration device (28) and the ink jet head (12).

However, Nowell, Jr. et al. do not disclose the ink reservoir that is applies a negative pressure by a difference in level of an ink reservoir surface and the nozzle; a preventative member that is floated on the surface of ink in the ink reservoir and prevents contact between the ink and air; wherein the preventative member is plural balls; and wherein the preventative member is a plate.

Nevertheless, Brooks et al. discloses in Figures 1-2 an ink jet printing system comprising the ink reservoir applies a negative pressure by a difference in level of an ink reservoir surface and the nozzle (column 5, lines 35-49).

Furthermore, Altendorf discloses in Figure 1-3 an ink supply system comprising:

- a preventative member (22) that is floated on the surface of ink in the ink reservoir (12) and prevents contact between the ink and air;
- wherein the preventative member is plural balls (20); and
- wherein the preventative member is a plate (42).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Brooks et al. and Altendorf in the Nowell, Jr. et al. ink supply system for the purpose of maintaining a desired negative pressure level in nozzles to prevent ink from seeping out of the nozzles and stably supplying ink from an ink container to an ink jet print head by removing air bubble.

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art references (US Pat. 4,489,334; US Pat. 6,059,405) cited in the PTO 892 form show an ink supply system that is deemed to be relevant to the present invention. These references should be reviewed.

Art Unit: 2861

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo, whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 872-9306.



ANH T.N. VO
PRIMARY EXAMINER

June 22, 2005